Position paper for W3C workshop “eBooks and Internationalization”

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I am a contributor to the internationalization of web platform standards:

- I’m the editor of the ECMAScript Internationalization API Specification[1], an Ecma standard complementing the ECMAScript Language Specification, which defines the core of the JavaScript language.
- As a member of Ecma TC39, I’m also working on improved Unicode support within the ECMAScript Language Specification itself[2].
- As a long-standing member of the W3C Internationalization Working Group, first representing Yahoo, then as an invited expert, I have reviewed several W3C specifications, raised internationalization issues, and proposed improvements.

I’m interested in gaining a better understanding of how web platform standards are used to create digital books, which internationalization issues arise in the process, and how web platform standards need to improve to address these issues. Some of these issues are likely to be shared with web applications, others will be unique or more important to digital publishing.

At this point, JavaScript is not widely supported yet in EPUB readers[3], so publications that need JavaScript for interactive features are more likely to be packaged as applications. However, as readers add JavaScript support, more EPUB publications will start using it. At the same time, it is likely that more digital books will provide content in multiple languages, as some traditional books, especially those with a high image-to-text ratio, already do. The issue of internationalizing with JavaScript then will become as important as it already is for web applications.

The first edition of the ECMAScript Internationalization API provides only a core set of functionality: String comparison, number formatting, and date and time formatting. In the second edition, we’re planning to add at least message formatting, case conversion, and support for Unicode character properties; we’re also investigating text segmentation, display names for languages and countries, and number parsing. The sixth edition of the ECMAScript Language Specification will at the same time provide support for Unicode supplementary characters and Unicode normalization. Will this be sufficient to get internationalized interactive digital books started?

References

1. ECMAScript Internationalization API Specification, Ecma International, 2012.
2. Supplementary Characters for ECMAScript, Norbert Lindenberg, 2012.
3. EPUB 3 Support Grid, Book Industry Study Group, 2013.